

# Ballina-Killaloe Flood Relief Scheme

## Options Considered – Option 2A, 2B and Option 3

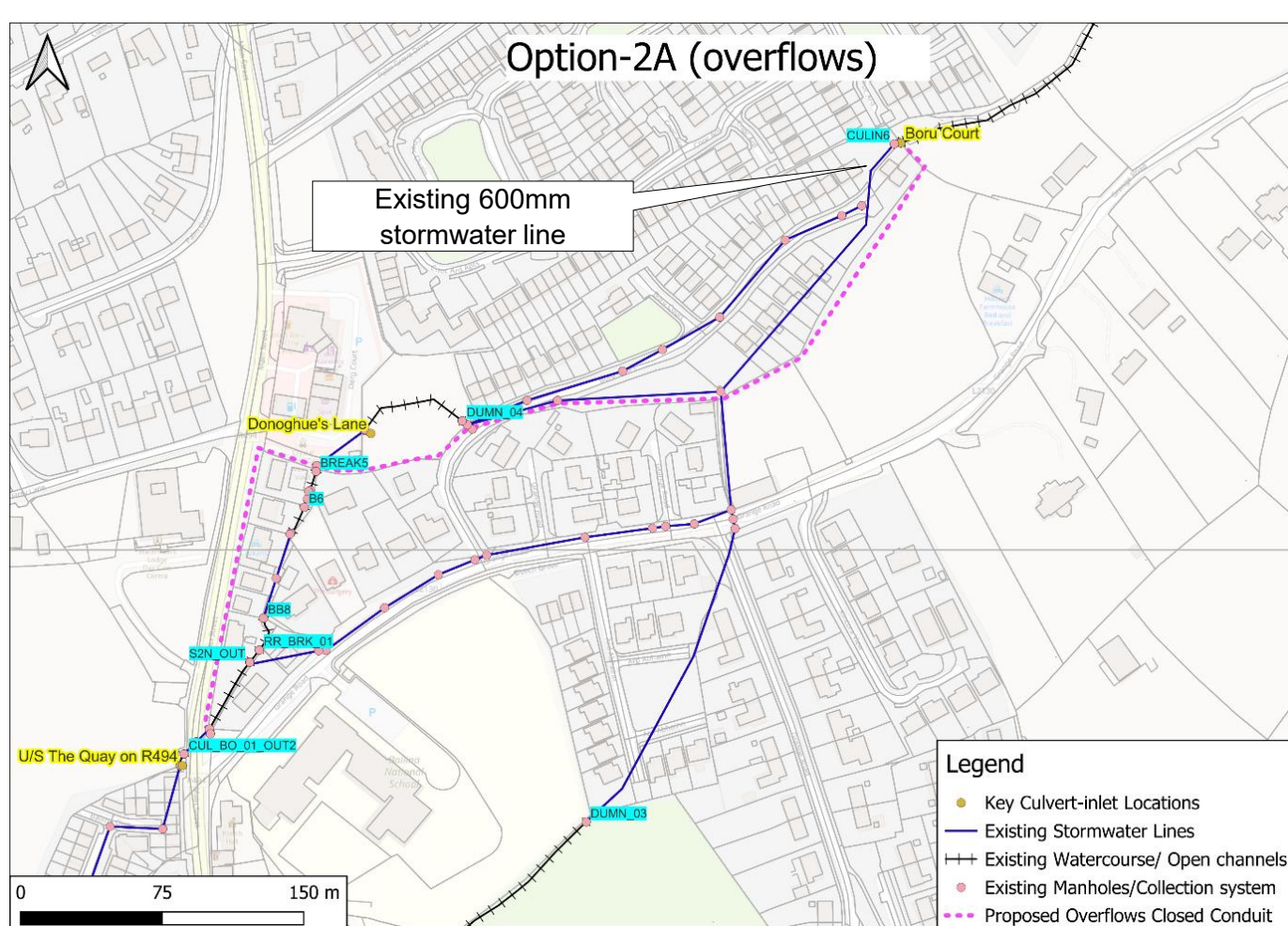
### Option 2A

Option 2A represents combinations of existing stormwater network and diverting the overflow through a proposed culverted watercourse just upstream of the Boru Court culvert inlet. The overflow is conveyed all the way through grounds of private property and further along Boru Court Road and O'Donoghue's Lane and further along the R494. The downstream end of the culverted watercourse is connected back into the existing watercourse just upstream of the Bridge on R494.

The figure below presents the alignment of the existing and proposed culvert (pink dotted line) for Option 2A overflow diversion scenario.

When flow in excess of 0.3m<sup>3</sup>/s is conveyed through the existing stormwater line (600mm size), the properties downstream of the pipe on O'Donoghue's Lane are at risk of flooding as the banks of the existing watercourse are overtopped. The proposed overflow pipe in Option 2A does not convey sufficient flow to reduce the flooding at O'Donoghue's Lane. To increase the overflow pipe any further (to 1050mm) is essentially Option 1A.

**Therefore, hydraulically Option 2A is not a feasible option.** The benefits and constraints of this option are not discussed as the option is not feasible.

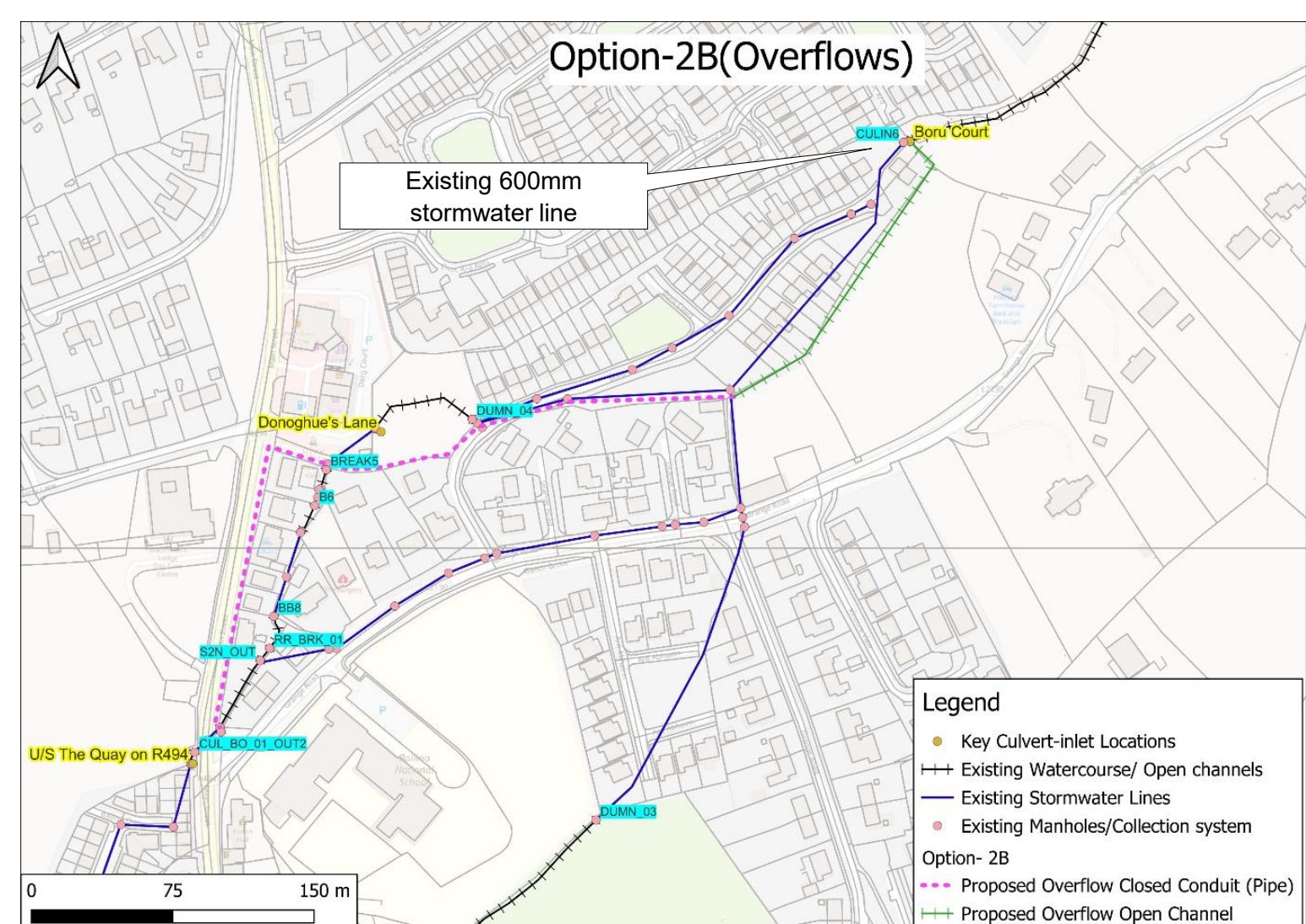


### Option 2B

Option 2B is the same as Option 2A but represents part of the diverted channel from Boru Court as an open channel rather than a closed conduit.

As with Option 2A, Option 2B results in flooding at O'Donoghue's Lane downstream due to the flow through the existing stormwater line exceeding 0.3m<sup>3</sup>/s. Due to the topography the area, it is not possible to adjust the bed level of the proposed overflow channel to convey more flow through the open channel.

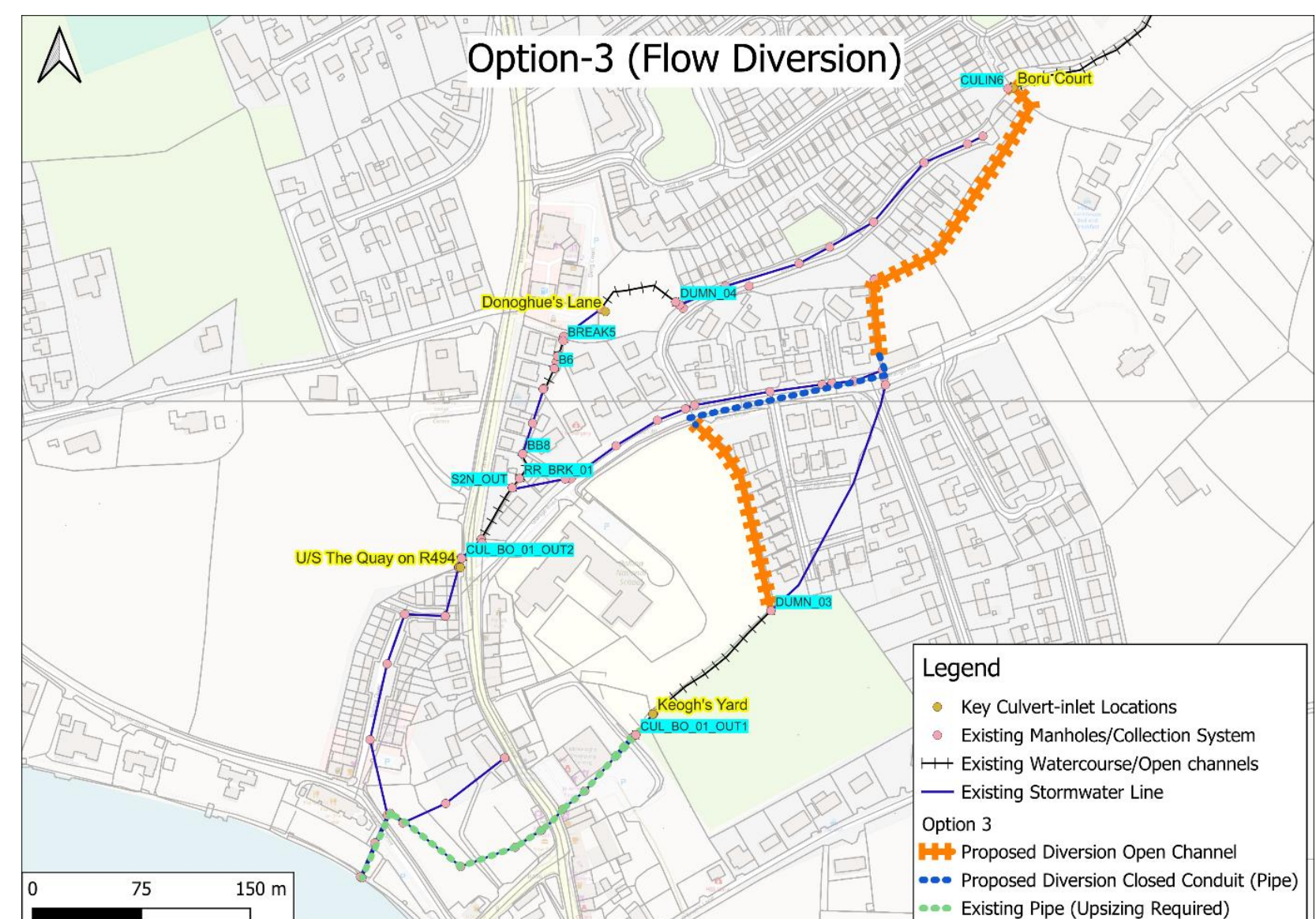
**Therefore, hydraulically Option 2B is not a feasible option.** The benefits and constraints of this option are not discussed as the option is not feasible.



### Option 3

Option 3 proposes a diversion of flow from the Drumbane River upstream of Boru Court through a culverted and open channel watercourse upstream of the Boru Court culvert. The flow is conveyed initially in an open channel reach through private property, then enters a piped section along Grange Road which outflows into a second open channel reach through private property connecting with an existing watercourse at McKeogh's Yard.

The figure (right) presents the alignment of the proposed combination of open channel and culverted watercourses for the Option 3 scenario. The benefits and constraints of Option 3 are considered below.



BENEFITS	CONSTRAINTS
<ul style="list-style-type: none"> <li>Properties previously flooded are protected.</li> <li>Flood flows are diverted through an open channel/culverted watercourse thus protecting properties along Boru Court Road and O'Donoghue's Lane.</li> <li>The existing stormwater line downstream of McKeogh's Yard along the existing watercourse will be upgraded which will drain the flow from the runoff surfaces contributing to flooding at Boruma Gastro Bar.</li> <li>3no. regional roads and 2no. Multiple Urban (Street) are protected when Option 3 is in place.</li> <li>No impacts to architectural features.</li> <li>Negligible impact on landscape character and visual amenity as the operation of the flood measures would result in underground culverts or culverts in an agricultural site.</li> </ul>	<ul style="list-style-type: none"> <li>Includes work within the Lower River Shannon SAC.</li> <li>Proposed works occurring within a zone of archaeological potential (SMR Zone).</li> <li>Minor impacts on hydromorphology and the hydrological regime through flow diversion and bridge conveyance improvements in the Drumbane River.</li> <li>Potential localised loss of or disturbance to flora/fauna within the footprint of construction works, particularly for the Lough Derg Natural Heritage Area (NHA).</li> <li>Technical constraints associated with its construction such as access, confined spaces, structural stability, and continued access for the owners to their premises both during and after construction.</li> </ul>